An Essay

On

# Phthisis Pulmonalis.

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# Phthisis Pulmonalis

When we look around through society and see the immense number who are affected with this disease our wonder is that people are so perfectly indifferent to its ravages, but then it is the nature of the human mind to become heedless of danger which is always present no matter how great it may be.

From its diffusion through all classes and its almost universally fatal termination, it has become the dread, I had almost said the reproach, of physicians, and the cause of the invention of numberless patent medicines which the public grasp at with avidity from the acknowledged insufficiency of the regular practice to stay this fearful disease which strips the earth of some of its best and fairest; indeed, it

seems to lie in wait for these with unwonted vigilance and never to relinquish its hold till its victim is secure in death.

Tubercles, which have always been regarded as the peculiar characteristic of this disease, consist in the deposition or formation from the blood of an unorganized, cheesy substance, of a yellow or yellowish-grey color, always by preference on the free surface of the mucous membrane though they may be found in almost, if not quite, every organ and tissue of the body. Their frequency in different organs depends upon the age of the patient. Thus in infants they are most frequent in the brain in that form of disease known as acute hydrocephalus; in children, in the glands, on the surface of the serous membranes,

or in the cancellated structure of the vertebræ and heads of the long bones, while in adults, their principal seat is the lungs. According to some authorities, one sixth of the whole human race perish by it in some of its various forms.

After puberty the age most obnoxious to it is between twenty and thirty, while, according to Dr. Papavoine, three fifths of all the deaths before the age of puberty are the result of tuberculosis. It also appears that women are more prone to it than men. It has been a question, whether this tubercular matter is deposited as something entirely new or foreign to the blood, or is owing to its improper elaboration? Most pathologists have adopted the latter opinion, considering it to be a kind of unnatural lymph, but Dr. Gregg of Buffalo, considers tubercles

to be simply a quantity of the red blood corpuscles deposited, it may be, on the abraded surface of the mucous membrane, which, having been deprived of their coloring matter and some water, assume this peculiar character. If this theory be correct then why do we not have tubercles formed in every case of inflammation where blood has been effused and during the progress of resolution this becomes deprived by the absorbents of these same ingredients, which are known to be the first that are removed?

I do not say this is not the case, but, if it is, then tubercles are not characteristic of phthisis or of the strumous diathesis.

This brings us to the consideration of another question in the pathology of this affection, which is; whether tubercles are the cause or the result of

inflammatory action? This would also seem to be very easy of solution if we accept this same theory of Dr. Gregg's.

As has been stated, they may be deposited on the inflamed mucous membrane, when they are certainly the result of this action; then we may have the blood corpuscles deposited in the minute capillaries from being in excess in the blood, and where by constant accretion the mass may become so large as to act as an irritating foreign body thus producing inflammation. Now if their excess may depend upon anything else than inflammatory action, by which the more fluid parts are effused, then they may certainly be both the cause and the result; but if their excess is not depending on anything else, then they can be only the result.

Its causes may be set down in general as anything that tends to weaken or depress the vital powers, and are as numerous, therefore, as the causes of debility. More definitely, they are want of pure air or exercise, insufficient amount or improper kind of food, too great mental labor and the deprivation of the natural amount of rest or sleep. Also the constant breathing of an atmosphere which is filled with fine particles of an irritating nature; but all of these must be long continued and not so severe as to destroy life by their direct effect.

It has also been observed that the sudden suppression of any habitual discharge may at least hasten its development.

The suppression of cutaneous eruptions, which, following the law observed in all cases of metastasis of attacking that

organ or tissue most resembling the one it left, develops an inflammation in the mucous membrane of the lungs which, as has been previously stated, is the most favorite seat of tubercles. From this we might justly infer the danger of local applications for the cure of any class of diseases affecting the skin or, its counterpart, the mucous membrane.

It might be asked, may not all these conditions, which have been mentioned as causes, be simply those most favorable to its development and only bring it on in such persons as are predisposed to its attacks by some peculiar taint in the system? But as there must, of necessity, have been some first cause, it is natural to suppose, that what hastens its inroads in such as are predisposed, might also be the direct cause in such as have no such taint,

The one great cause of its prevalence is to be found in the fact that it is transmissible from parent to child and it is extremely rare, that any person born of parents having this strumous diathesis is not himself predisposed to it, and quite as rare, that any one, having this taint, ever gets even so clear of it as that his children will not inherit it. This fact of its hereditary transmission proves it to be preëminently a constitutional affection, which has its influence in forming the very individuality of the patient.

Its essential character is not displayed in its mere physical phenomena but in a derangement of the vital forces. It may be argued, that this is extremely vague and a very comfortable cloak behind which to hide our ignorance

but then. there are things, which, in our present state of knowledge, we cannot know. Thus, what is vital force or what is life? We may know, to a certain extent, what will support and what will destroy life, but let him who can, distinctly define it. And let me ask, how can a parent transmit to his child anything purely physical, even admitting, which we do not, that in impregnation, the semen enters the ovule in substance and that, by their growth and development, the child is formed. Does not this rather prove that every particle, every minutest cell of that parent's organism is affected by the disease, and if so, then also his mind, for this controls directly the development of the physical? But, in our school, this is a useless distinction or rather, none

at all, where all are constitutional. Take even primary syphilis, considered by most to be purely local, and how do you account for the fact, that, from the inoculation with the virus of a Hunterian chancre having an ulcer of almost any form or character, may be developed a soft chancre, having an entirely different appearance, if it is not already impressed with the individuality of the patient, which could only be the case after it has been recognized and its action upon the system modified by the vital force, unless, perchance, you hold that the part itself may impress upon it the individuality of the entire person.

Phthisis proper is divided into two forms, acute and chronic. The latter is much the more common and is essentially that which is generally known

as consumption. It sets in generally with a short and continuous cough and troublesome feeling of lassitude with frequently an acceleration of the circulation. Then we have loss of appetite and consequent wasting, which eventually becomes extreme, but the intellect remains unaltered or it may seem to be unusually bright, especially the imagination. Afterwards, we have dyspnoea, then hectic fever with its debilitating night sweats and deceptive blush on the cheeks, also colliquative diarrhoea, when death soon closes the scene. The cough at first is mostly dry, but as the disease progresses an expectoration of frothy mucous sets in, which, as a general thing, is the more frothy as it is more difficult to detach. The sputa becomes thicker, often greenish, or it may be in the form of round

masses which retain their shape and is known as nummular or money like sputa, and which is a characteristic expectoration of phthisis, although it is not confined to this disease, neither is it always present. Towards the close, the sputa becomes of a dirty, greyish, purulent appearance, containing pus cells, fragments of lung tissue, and tubercular matter, which, when definitely recognized, settles conclusively the diagnosis.

The dyspnoea becomes gradually more and more marked as the lungs become filled with the tubercular deposit, or solidified by exudation, thus rendering useless a great many of the air cells or minute ramifications of the bronchi. This causes not only difficulty, but also, very great acceleration of the breathing. These symptoms may continue almost

any length of time without apparently much change, but, sooner or later, more dangerous or, at least more ominous, symptoms set in and we have a fatal termination.

The diarrhoea may set in earlier in the disease from the deposition of tubercular matter in the glands of the small intestines or caecum, which by destroying the power of the lacteals to take up the nutriment from the food, tends the more rapidly to destroy the patient by depriving him of the means of sustaining life. The signs of approaching dissolution are as various as its causes, which may be an attack of acute phthisis, pneumonia, inflammation of the intestines or brain, rupture of an artery in the lungs by sloughing, or perforation of the pleura by which fluid or air is allowed to enter the pleural

sac causing collapse of the lung. When, as is usually the case, adhesion has taken place between the pulmonary and costal pleura no such results follow perforation. By some authors it is divided into three stages: that of commencing deposition, that of still greater deposition causing consolidation and that of softening and the formation of cavities; but they may all coëxist in different portions of the lungs.

The first stage may exist and the patient be unconscious of any trouble, and it may last for years, till the second stage sets in, when it may run on to a fatal termination without any cessation in the violence of its symptoms.

In the third stage there is inflammation which goes on to suppuration, and the pus is discharged into the bronchial tubes

and may be thrown out of the system in the act of coughing, thus leaving cavities or, as they are technically called, vomicæ.

The bloodvessels, of the parts in which these are seated, are obliterated by the coagulation of the blood within them and, as they very rarely ulcerate, they remain as fibrous cords traversing the cavity.

Rarely, they slough off before obliterated, thus giving rise to fatal hæmorrhage. The inflammation also causes exudation of plastic lymph on the surface of the pleura, which becoming organized prevents trouble in cases of perforation. Thus we see how nature guards, in her rude way, the life of the patient, by choosing the least of two evils, if we could admit her to be capable of a choice in any case.

It is not always that a case goes on constantly from bad to worse, and we may

have what is called the retrogressive type, in which the tubercles, after having been formed, seem to take on the calcareous or chalky degeneration, becoming dry, shriveled and hard, some of which may be discharged with the expectoration and others remain in the lungs simply as foreign bodies by becoming encysted.

The second or acute form of phthisis frequently follows other diseases or it may be brought on by the same causes as the chronic form, only acting with greater intensity. In this, even more plainly than in the other, can we see that it is a constitutional affection, of which the lung trouble is only a local indication.

It frequently commences with a chill followed by fever. Very soon hectic fever developes itself, together with very debilitating night sweats and great emaciation.

The great restlessness and prostration with frequent delirium causes it to resemble closely typhoid fever, especially when the extension of the tubercular deposit to the intestines, causes diarrhoea and the other abdominal symptoms of the latter complaint. The differential diagnosis is founded on the thoracic disturbance, where we have cough with copious expectoration, sometimes of bright blood, and rapid breathing.

It sometimes resembles acute bronchitis or pneumonia, even so closely as to render the diagnosis extremely difficult, if not absolutely impossible. The principal symptoms by which we may distinguish it from bronchitis are, that the stein is less hot, the breathing more rapid, the rales more audible at the lower part of the chest and the emaciation is more rapid in phthisis.

This form is generally very rapidly fatal, terminating sometimes in less than a fortnight, from which fact it is commonly known as "galloping consumption".

The prognosis of this, as well as of the chronic form, has been universally considered very unfavorable, some even holding that it is always fatal. May the time soon come, when, by strict adherence to the great law of cure and the continued development of the powers which are inherent in our system, we may be able to entirely change the record in regard to both the acute and chronic form and have phthisis as amenable to treatment as any other deep seated and hereditary affection.